

Abstract:

The present invention relates to a process for preparing an optical waveguide component from acrylate/titanium alkoxide composite material, which is characterized by using an acid-free sol-gel process to prepare a precursor solution of acrylate/titanium alkoxide composite film, then coating the precursor solution on a silicon wafer then drying, and producing the optical waveguide component having channels by using a lithography process. The present invention also relates to an optical waveguide component of acrylate/titanium alkoxide composite material, the material has excellent transparency and flatness and its refractive index varies with the amount of titanium alkoxide contained therein. When an optical waveguide ~~component~~ component is prepared from the ~~component~~, composite the reduction of at a near-infrared ray will ~~reduce to~~ is less than 0.7 dB/cm and therefore ~~is advantageously~~ the waveguide component is advantageous for use as an optical communication element.